

Do changing rates of adolescent substance use and sexual risk behaviour impact on associations between these behaviours? Analysis of two Scottish cohorts.

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Introduction

There is evidence that some health-risk behaviours tend to cluster in adolescence. A major focus has been on associations between substance use and sexual behaviour. This may reflect a predisposition towards risky behaviours in some individuals. If so, then clustering might be less evident in periods when such behaviours are more prevalent ('normative'). However, studies have not examined whether relationships between health-risk behaviours change over time. Within the UK, there were significant increases in some adolescent health-risk behaviours during the 1990s. It is possible that relationships between health-risk behaviours also changed over this time period.

Aim

This study analysed data from two adolescent cohorts, born 12 years apart in the same geographic area (West of Scotland). Our cohorts were adolescents in the late 1980s and late 1990s/early new millennium respectively.

We examined associations between substance use and sexual risk behaviour:

- at two different time points, to see if they differed by period;
- among males and females, since most studies have found stronger associations among females than males; and
- in both early (age 15) and late adolescence (age 18-19), since associations between substance use and risky sexual behaviour may change with age.

Sample and measures

The '1987/1990' study cohort were aged 15 in 1987 and 18-19 in 1990; the '1999/2003' study cohort were aged 15 in 1999 and 18-19 in 2003.

In both studies information was obtained:

- at age 18-19 on: current smoking; age started smoking; frequency of current drinking; illicit drug use; number of sexual partners; and age at first sexual intercourse with someone of the opposite sex.
- at age 15 on: frequency of current drinking; and illicit drug use.

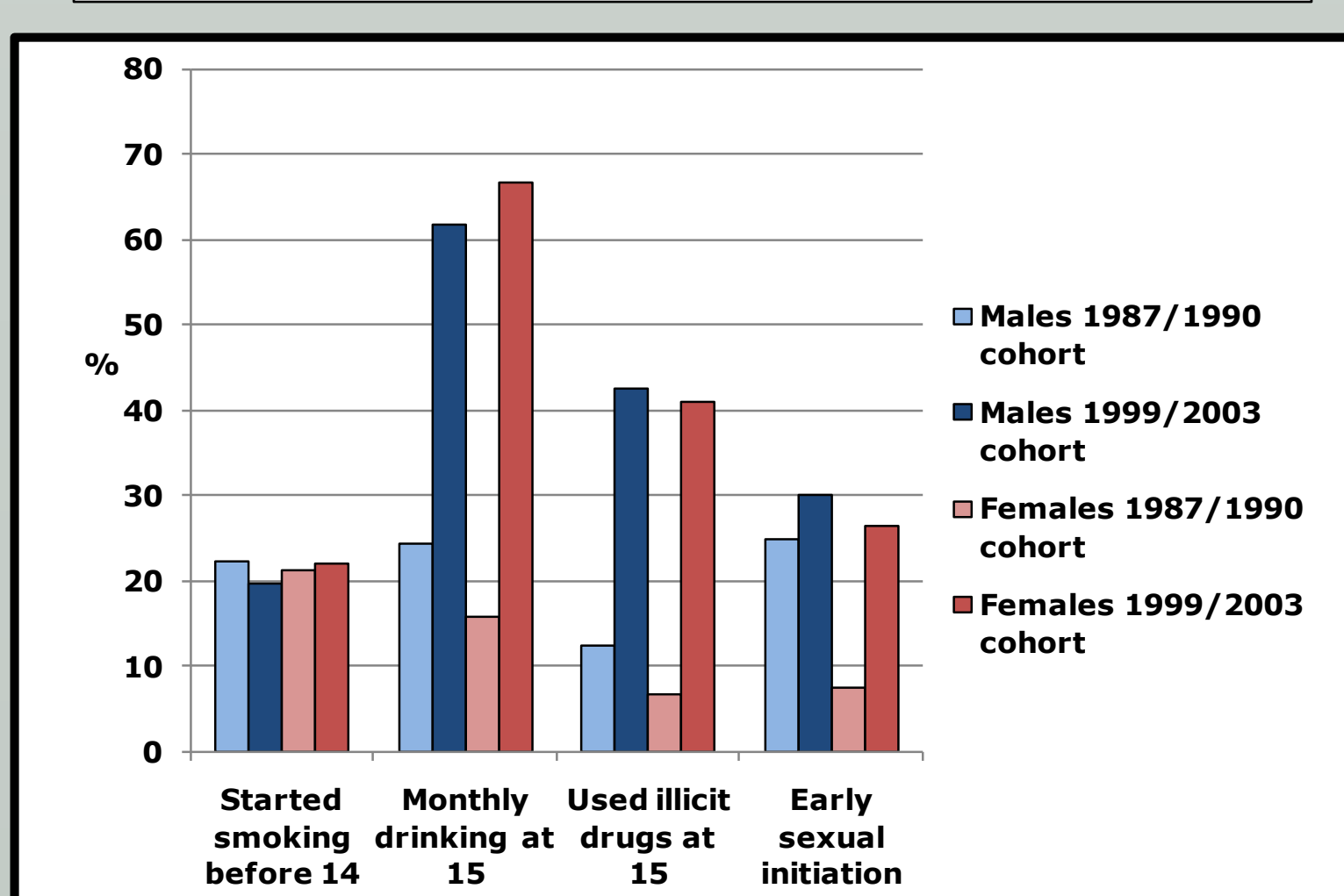
Analyses

We examined rates of, and associations between:

- early adolescent substance use and early sexual initiation (age 15 or younger); and
- late (age 18-19) adolescent substance use and multiple sexual partners (three or more).

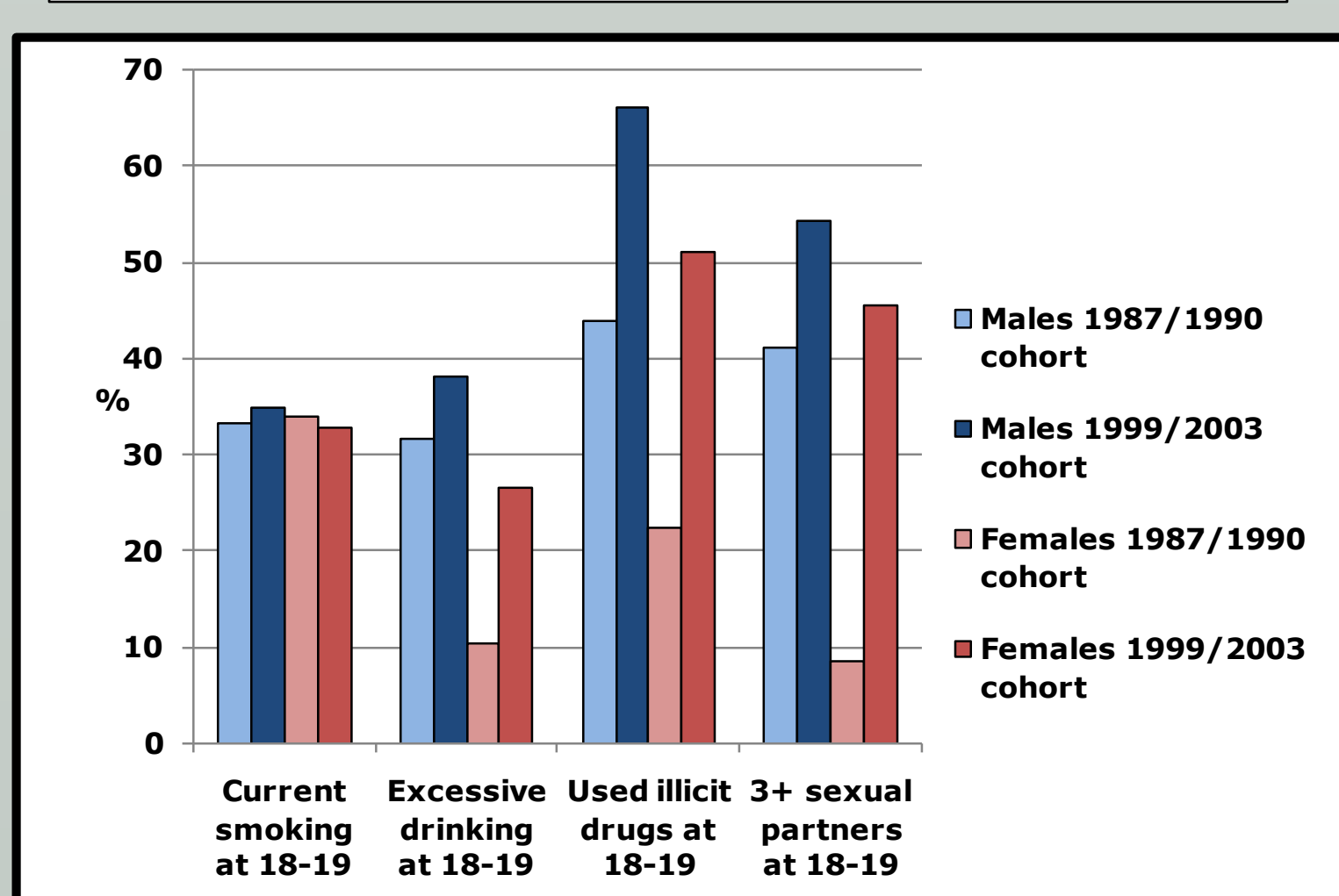
We calculated mutually adjusted odds ratios (also adjusting for social class) for associations between substance use and risky sexual behaviour in each cohort by gender, and at each age, and tested for interactions.

Rates of early adolescent behaviours among males and females in the two cohorts



N = 884 (1987/1990 cohort) and 933 (1999/2003 cohort)

Rates of late adolescent behaviours among males and females in the two cohorts



N = 887 (1987/1990 cohort) and 910 (1999/2003 cohort)

Results - rates

In both early and late adolescence, rates of drinking, illicit drug use and risky sexual behaviour (but not smoking) increased significantly between the earlier and later cohort.

Increases were greater among females than males.

Results - associations

There were strong associations between substance use at or before age 15 and early sexual initiation, and between late adolescent substance use and multiple sexual partners (mutually adjusted odds ratios around 2.00-3.00). These relationships were broadly similar for males and females.

Despite greater health-risk behaviour rates in the later cohort, there was little evidence that relationships between use of each substance and risky sexual behaviour had changed over time.

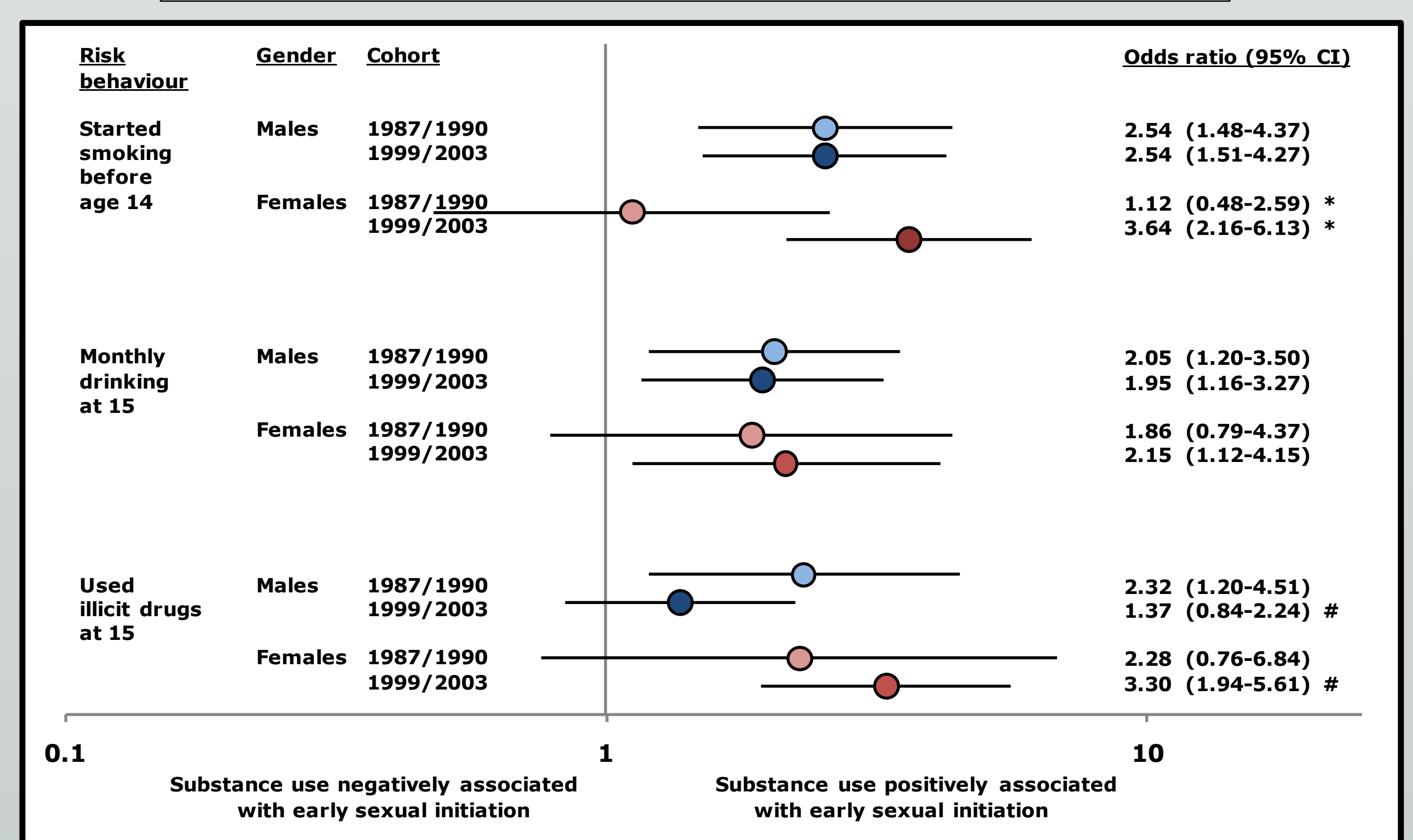
Conclusion

Despite marked increases in adolescent health-risk behaviour rates during the 1990s, the strength of associations between substance use and sexual risk behaviour remained largely similar.

These findings suggest public health policies should recognise strong relationships between adolescent risk behaviours and support more integrated approaches to prevention and treatment. This might include routine offers of advice and counselling for alcohol and illicit drug use within sexual health clinics.

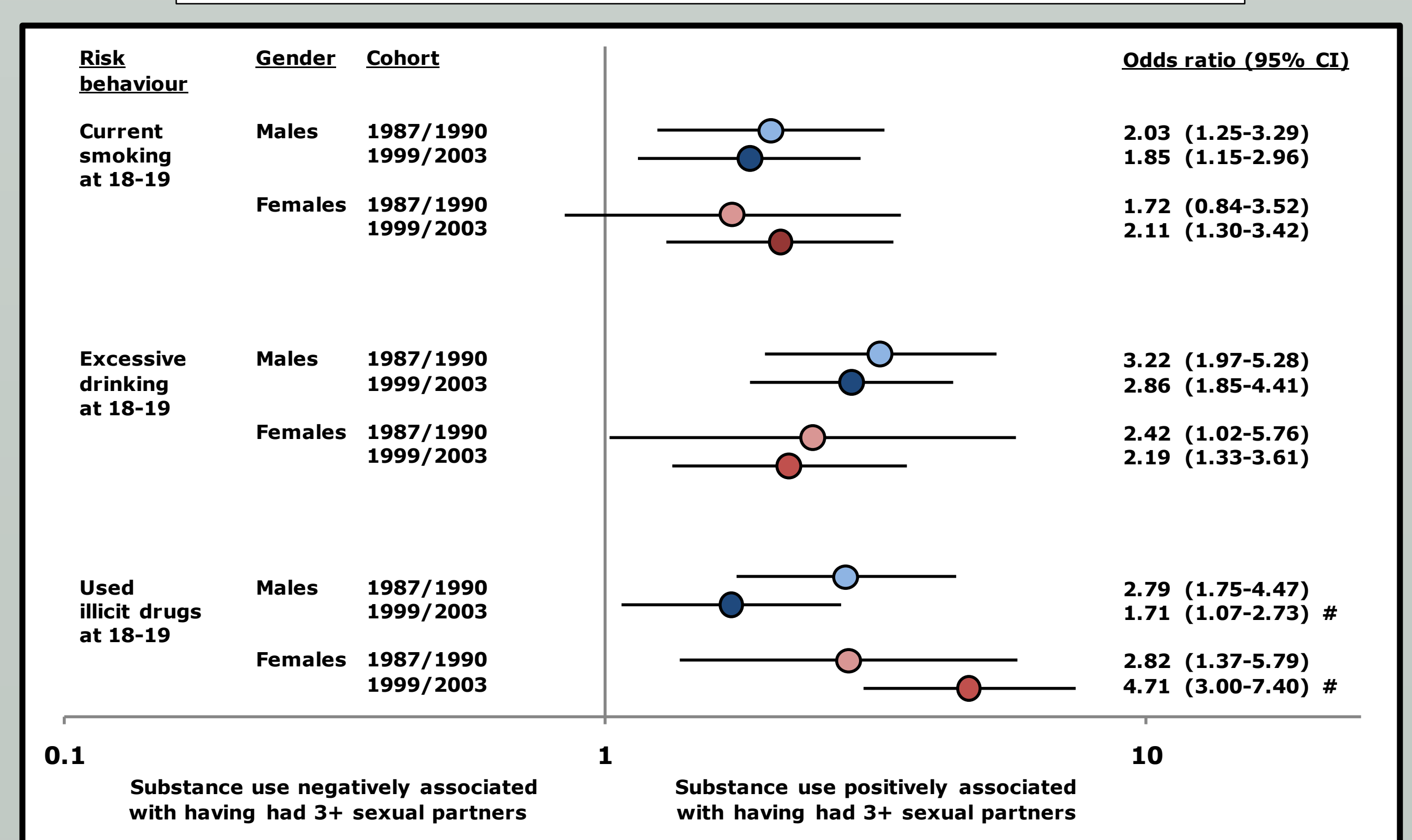
Clustering of adolescent health-risk behaviours partly reflects shared underlying determinants. Thus a holistic preventive approach, addressing broad determinants of risk behaviours, from individual through to societal influences, beginning at early ages, is needed.

Mutually adjusted associations between early adolescent substance use and early sexual initiation among males and females in the two cohorts



* = significant difference between cohorts; # = significant gender difference

Mutually adjusted associations between late adolescent substance use and multiple sexual partners among males and females in the two cohorts



= significant gender difference

Acknowledgements

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